CLAIMS

What is claimed is:

1. A light emitting chip with a heat dissipating structure, applied in a light emitting diode (LED) as a light source, the light emitting chip comprising:

an epitaxy chip, having a lower surface attached with plural metal blocks;

a heat dissipating substrate, having an upper surface attached with a p-electrode and an n-electrode, the p-electrode and the n-electrode being positioned corresponding to the metal blocks on the epitaxy chip and being in contact with the metal blocks, the heat dissipating substrate having plural openings thereon; and

plural heat conducting cylinders with high heat dissipating characteristics, formed inside of the openings on the epitaxy chip.

2. The light emitting chip as claimed in claim 1, wherein the heat conducting cylinder is composed of In, Pd, or an alloy of In and Pd.

3. The light emitting chip as claimed in claim 1, wherein the heat dissipating substrate is a ceramic substrate.

4. The light emitting chip as claimed in claim 1, wherein the heat dissipating substrate is composed of aluminum oxides.

5. The light emitting chip as claimed in claim 1, wherein the heat dissipating substrate is composed of aluminum nitrides.

6. The light emitting chip as claimed in claim 1, wherein the heat dissipating has a lower surface connected to a metal heat-dissipating layer.

7. A light emitting diode (LED), emitting light as imposed with electricity, which comprises:

a light emitting chip, having of an epitaxy chip, a p-electrode, a n-electrode and a heat dissipating substrate, the p-electrode and the n-electrode being attached to a bottom surface of the epitaxy chip and to a top surface of the heat dissipating substrate, and the heat dissipating substrate having plural heat conducting cylinders;

a frame, having a groove formed for holding the light emitting chip via attaching to a bottom surface of the heat dissipating substrate, the frame being electrically connected to the light emitting chip through a conducting wire; and

an epoxy resin, packaging the frames and the light emitting chip to form the LED.

8. The LED as claimed in claim 7, wherein each of the heat conducting cylinders is composed of In, Pd or an alloy of In and Pd.

9. The LED as claimed in claim 7, wherein the heat dissipating substrate is a ceramic substrate.

10. The LED as claimed in claim 7, wherein the heat dissipating substrate is composed of aluminum oxides.

11. The LED as claimed in claim 7, wherein the heat dissipating substrate is composed of aluminum nitrides.

12. The LED as claimed in claim 7, wherein the light emitting chip in the groove of the frame is covered with a light hybrid layer.

13. The LED as claimed in claim 12, wherein the light hybrid layer comprises a mixture of scattering particles, diffracting particles and fluorescent particles.

14. The LED as claimed in claim 13, wherein each of the scattering particles is composed of quartz, glass, or transparent polymer.

15. The LED as claimed in claim 13, wherein each of the diffracting particles is

composed of a material selected from the group consisting of TiBaO, titania, silicon oxide, silicon dioxide, barium sulfate and calcium carbonate.

16. The LED as claimed in claim 13, wherein each of the fluorescent particles is composed of inorganic fluorescent materials.

17. The LED as claimed in claim 13, wherein the fluorescent particles comprise lanthanide aluminates.

18. The LED as claimed in claim 13, wherein the fluorescent particles comprise silicates of alkaline-earth metal.

19. The LED as claimed in claim 7, wherein the light emitting chip in the groove of the frame is covered by a fluorescent layer.

20. The LED as claimed in claim 19, wherein the fluorescent layer is composed of YAG (yttrium aluminum garnet), lanthanide aluminates or silicates of alkaline-earth metal.